

transmitting human immunodeficiency virus (HIV) through blood transfusion in the United Kingdom has been estimated by the DHSS to be less than one case per million donations. Screening tests may admittedly not identify all infectious donations, but the number of recently infected donors who have not yet had time to develop HIV antibodies is likely to be extremely low. Despite their rarity, the inability to detect them is an important psychological gap but this will probably be almost closed if the newly developed tests of HIV antigen^{1,2} are introduced.

Dr Kay cites the risk of transmitting other infective agents to support her argument. No clinical data yet exist within the United Kingdom to suggest that non-A non-B hepatitis is a significant transfusion problem. Cytomegalovirus infection can be dangerous but only to particular recipients, such as patients with bone marrow transplants and premature neonates. Neither of these two categories could remotely be considered as potential autologous donors.

Autologous transfusions avoid sensitisation to alloantigens of blood cells and plasma but these problems are of greatest concern to regular transfusion recipients. Again, for these patients autologous transfusion would be inapplicable.

Patients with IgA deficiency and anti-IgA may suffer severe anaphylactic reactions during transfusion. Total IgA deficiency is, however, uncommon—nearer one in 700 than the 7% incidence stated—and clinical transfusion reactions are rare.

For many surgical patients with modest degrees of blood loss red cell transfusions are unnecessary, and haemodilution through the use of crystalloids or colloids is more in the patient's interest. Indeed, preoperative haemodilution, which involves removing blood before surgery and replacing it by volume expanders, has been advocated on sound physiological principles. Promoting greater economy in the use of voluntarily donated red cell products might therefore be a safer and more constructive approach.

If those concerned in these aspects of transfusion fail to make decisions based on careful consideration of the facts we are in danger of being stampeded into an enormously expensive and wasteful exercise with at best marginal effects on patient safety and at worst a significant deterioration.

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SIR,—It is worth emphasising that Dr L A Kay described only one form of autologous transfusion, the predeposit form. There are two other forms: immediate preoperative haemodilution and intraoperative blood salvaging.¹ Active encouragement of these types may well have a much greater impact on reducing patient exposure to homologous blood than the predeposit form. Aside from their intrinsic benefits, the fact that anaesthetists play a key part in the execution of these procedures will inevitably mean that these medical colleagues, who have such an important influence on initiating blood transfusion associated with surgery, will reflect a good deal more on the indications for blood transfusion. Moreover, it could prove to be a factor in persuading surgical colleagues to review their techniques with a view to further reducing operative and postoperative blood loss.

If blood transfusion prescribing habits in the United Kingdom have much in common with those in the United States then as much as 30% of the red cell transfusions (whole blood, plasma depleted whole blood, red cell concentrates) are probably quite unnecessary. The figure for fresh frozen plasma may be as high as 80%. Clearly many patients are being needlessly exposed to the many risks of blood transfusion and it is a mathematical certainty that a reduction in blood use of this magnitude, particularly in elective surgery, would have a much greater impact than the many millions of pounds currently being spent on testing all blood donations; it would also exceed any contribution likely to be made by predeposit autologous transfusion.

A more critical use of blood transfusion is already evident in the United States, and to assume that predeposit autologous blood transfusion is likely to make a major cost effective impact on diminishing the transmission of viral diseases associated with blood transfusion is premature and may well direct scarce financial and manpower resources in the wrong direction. Pilot autologous transfusion studies should be supported, but in the first instance these should be on a research basis and should be located where the transfusion service and clinical teams can also examine other ways of reducing the exposure of patients to homologous blood transfusion.

As Dr J M Cundy suggested (31 January, p 308), the time has surely also come when we need to challenge the notion that a haemoglobin concentration of 100 g/l is the lower limit for safe anaesthesia. There is now an urgent need for a commitment of resources to clinical research into what is often called "the transfusion trigger." In the context of surgery we need to ascertain more clearly what we may or may not be "getting away with." A stampede to develop predeposit autologous transfusion programmes throughout the UK ought to be resisted. Moreover, it is inappropriate for clinical colleagues to promote predeposit autologous transfusion to their patients. Blood donations collected by the United Kingdom transfusion services are outstandingly safe, and the widescale promotion of this type of autologous transfusion will create needless anxieties for patients and their relatives.

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The Liverpool urban obstetric flying squad

SIR,—Since 1978 no general anaesthetics have been administered on calls of the Liverpool obstetric flying squad, and blood has rarely been transfused (Dr T D Ryan and Mr G M Kidd

(10 January, p 97)). Experience in Portsmouth has differed (table). With a mixed urban and rural population the district has an annual birth rate of 7000. The main maternity unit at St Mary's Hospital is 10-13 miles from three outlying districts. Traffic congestion can be a major problem. The flying squad leaves from St Mary's Hospital; the equipment is stored at the hospital entrance; and staffing is arranged so that senior help is swiftly available at the inception of the call out.

Since 1981 the flying squad has made 56 calls, and 16 general anaesthetics have been administered. All anaesthetics were given at the outlying units and were because of retained placenta. Blood was transfused on five occasions and plasma substitute four times. No general anaesthetics were given at patients' homes, but blood was transfused three times. The flying squad made only two calls in 1986. One call was because of imminent eclampsia. The patient received intravenous sedation and hydralazine. The second visit was because of shoulder dystocia. The baby was delivered before the flying squad arrived, suffered birth asphyxia, and was resuscitated by the anaesthetist and then transferred to the neonatal intensive care unit.

Portsmouth still needs an obstetric flying squad, with the anaesthetist playing a major part in the team. The apparatus used by him is portable, simple, and upgraded regularly. It is familiar because it is based on the apparatus used daily in theatre. The term "occasional anaesthetist" is puzzling. Recent reports show that inexperience contributes to anaesthetic morbidity and mortality.^{1,2} There is no place in obstetric anaesthesia for the "occasional anaesthetist." To disband the obstetric flying squad would be premature, and without an anaesthetist the care offered to a vulnerable group, those delivering outside main units, would be substandard.

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SIR,—Dr T D R Ryan and Mr G M Kidd (10 January, p 97) have shown a major change in the practice of the Liverpool urban obstetric flying squad. Their findings are in line with those of a recent review of the Bristol obstetric flying squad¹ and confirm a dramatic reduction in the use of this service. They conclude, "The presence of an anaesthetist in the squad is now an unnecessary luxury." This view is surely applicable only to purely urban services, and, although they recommend a review of all flying squads in the light of local needs, their blanket statement can only increase the risk of complacency arising in the many units throughout the UK with some degree of rural commitment.

Total number of calls made by Portsmouth obstetric flying squad, place visited, numbers of general anaesthetics, and blood transfusions given 1981-6

Year	Total No of calls	No in:		No of general anaesthetics	No of blood transfusions
		Outlying maternity unit	Patient's home		
1981	8	5	3	2	1
1982	10	8	2	2	
1983	19	14	5	6	3
1984	6	5	1	1	
1985	11	11		5	1
1986	2	1	1		
Total	56	44	12	16	5